WHAT IS CLAIMED IS:

1. An active filter for reducing the common mode current in a pulse width modulated drive circuit driving a load;

said drive circuit comprising an a-c source, a rectifier connected to said a-c source and producing a rectified output voltage connected to a positive d-c bus and a negative d-c bus, a PWM inverter having input terminals coupled to said positive d-c bus and negative d-c bus and having a controlled a-c output, a load driven by said a-c output of said PWM inverter, a ground wire extending from said load, and a current sensor for measuring the common mode current in said drive circuit in said ground wire, said current sensor producing an output current related to said common mode current;

said active filter comprising a first and second MOSFET transistor, each having first and second main electrodes and a control electrode, and an amplifier driving a respective one of the transistors; said first electrode of said first and second transistor coupled to a common node, said second electrodes of said first and second transistors being coupled to said positive d-c bus and said negative d-c respectively; each of said amplifiers having an input coupled to said output of said current sensor and each having an output connected to a respective one of said control electrodes; and a d-c isolating capacitor connecting said common node of said first electrode of said first and second transistors to said ground wire.

2. The active filter of claim 1, wherein the amplifiers provide respective bias voltages that offset gate threshold voltages of each of the transistors.

3. The active filter of claim 2, wherein one transistor is an N channel MOSFET and the other is a P channel MOSFET and the respective bias voltages comprises positive and negative d-c voltages.

4. The active filter of claim 1, further comprising a feedback circuit coupling the common mode to an input of respective ones of said amplifiers.

5. The active filter of claim 4, wherein the feedback circuit comprises a feedback resistor coupling the common node to the respective inputs of said amplifiers.

6. The active filter of claim 5, wherein the feedback circuit further comprises a further resistor coupling said common node to a common connection, said d-c isolating capacitor being coupled between said common connection and said ground wire.

7. The active filter of claim 6, wherein the common connection comprises a common point of a floating power supply that provides positive and negative voltages to respective one of said amplifiers.

8. The active filter of claim 7, wherein the common point of the floating power supply is approximately at a midpoint potential between the positive and negative d–c busses.

9. The active filter of claim 8, further comprising an amplifier stage coupled to at least one of said transistors for providing a feedback voltage to at least one of said amplifiers to regulate a bias current flowing through at least one of said transistors to a reference level.

10. The active filter of claim 8, further comprising an amplifier stage having an input coupled to said positive and negative d-c busses and an output connected to an input of at least one of said amplifiers, thereby to regulate the common point of the floating power supply substantially to the midpoint potential between the positive and negative d-c bus voltages.

11. The active filter of claim 10, wherein the amplifier stages is connected to the positive and negative d-c busses by a resistive voltage divider connected between the busses.

12. The active filter of claim 4, wherein the sources of said first and second transistors are coupled together via respective resistors to the common node.

13. The active filter of claim 12, wherein the feedback resistors are coupled directly to the common node.

14. The active filter of claim 12, wherein the feedback resistors are coupled to the common node via the respective resistors, and the feedback resistors are coupled respectively to the sources of the first and second transistors, thereby forcing a voltage across the respective resistors to follow respective input voltages to the amplifiers driving respective ones of the transistors.

15. The active filter of claim 14, further comprising oppositely polarized diodes coupling the current sensor output and the inputs of respective ones of the amplifiers.

16. The active filter of claim 14, further comprising oppositely polarized diodes coupling the common node to said isolating capacitor.

17. The active filter of claim 9, wherein the amplifier stage includes an amplifier having a clamping diode coupling an input and output of the amplifier, thereby clamping the output voltage of the amplifier to the input voltage of the amplifier when current flows through at least one of said transistors.

18. The active filter of claim 16, wherein the oppositely polarized diodes coupling the common node to the isolating capacitor are coupled to the common node by respective coupling resistors.

19. The active filter of claim 18, further comprising a first resistor coupling the source of one of said transistors to the input of said amplifier stage, and further comprising a second resistor coupling a voltage developed across one of said coupling resistors to said input of said amplifier stage, thereby canceling a voltage caused by a current flowing in one of said transistors such that the output of the amplifier stage stays constant at a level representing a quiescent bias current through at least one of said transistors.